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23. The invention as defined in claim 21 wherein an editor's contact closure is an input to said processor to start playback.

24. The invention as defined in claim 21 wherein said monitor determines a size of the packet from a start of the packet, and generates an IEC 958 header based on said determined size.

25. The invention as defined in claim 24 wherein said device places the header and AC-3 packet in buffer, supplements the unfilled spaces in the buffer with a series of bits, and

wherein said device outputs data from the AES-3 card as PCM audio signal.

26. The invention as described in claim 21 wherein the AC-3 data is stored as a data file.

27. The invention as defined in claim 26 wherein the data file is stored on a CD-Rom.

REMARKS

The Final Rejection Office action dated September 10, 2002 and the references cited therein have been carefully considered. This Action was made Final via the marking of that Box Status on the Office Action Summary PTO Form PTO-326 (Rev. 04-01). However, the Detailed Action did not

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reiterate this Final Rejection Status. A telephone communication with the Examiner Michael N. Opsasnick on November 12, 2002 confirmed the Final Rejection Status of this Action. This Response After Final has been prepared as per the Examiner's direction.

Claims 1 through 3 and 5 through 27 are pending in the application. All claims stand rejected by this Final Rejection Office Action, no claims stand objected to or allowed.

Claim 4 was canceled without prejudice in the Amendment "A".

In view of the following remarks, all pending claims overcome the rejections set forth in the Office Action and are in condition for allowance. Accordingly, favorable reconsideration of all pending claims is respectfully requested.

Claims Rejection – 35 USC Section 102

The Examiner held in this Final Rejection Office Action that recent changes made to 35 U. S. C. Section 102 (e), by the American Inventors Protection Act of 1999 (AIPA), do not apply to the examination of this application. He based this decision on the fact that the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U. S. C. 122(b).

Applicant concurs that this present application is to be examined under 35 U. S. C 102(3) as being anticipated by the United States Patent No. 6,226,758 B1 issued to Gaalaas et al.

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Specifically, the Examiner held that as per claims 1 through 3, and 5 through 27 were all anticipated by various elements of the invention taught by Gaalaas et al.. This patent to Gaalaas et al. teaches a sample rate converter for non-audio AES data channels, wherein channel status information is block transferred, access to receive channel blocks is facilitated and where the re-transmitted blocks are sent at the output sample rate.

Applicant by this Office Action Response amends Claims 1, 6, 15, and 24 more clearly describing the present invention apparatus and methods for transmitting video and motion picture broadcasts with AC-3 audio compression systems with direct from the audio studio multi-channel audio capability in a direct satellite broadcast system. The amendment to Claim 24 corrects a comma instead of a period at the end of that claim.

Reconsideration of this rejection in view of the amendments to Claims 1, 6, 15 and 24 is respectfully requested.

The Applicant posits that the United States Patent to Gaalaas et al. does not teach nor describe the present invention, a method and apparatus to accomplish the "studio direct" broadcast of video and television programming recorded with AC-3 through an AES-3 transport. More specifically, the use of a state machine in combination with a real time clock and SMPTE timecode readers to provide automatic means of checking the playback quality of digital transmissions both on air and in the preparation of data storage means in a satellite broadcast facilities.

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Prior Art Cited by the Examiner Made of Record

The Prior Art made of record and not relied upon, considered pertinent to Applicant's disclosure are the United States Patents to Mori et al. (US-6,208,802), Ichikawa et al. (US-5,917,836), Hinderks (US-6,332,119), Hinderks (US-6,041,295), Smyth et al. (US-5,956,674) and Non Patent Documents, the articles to Johnston, "MPGE-Audio Draft, Description as of Dec. 10, 1990", pp. 336-337, 191 IEEE and Angelici et al., "New Architecture for an AES-EBU Digital Audio Receiver", pp. 694-698, IEEE.

Applicant has considered these references enumerated above and have not found them to be of particular relevance and materiality to the present invention.

The Examiner did not object to the drawings originally filed. The originally filed drawings are not amended by this Office Action response.

Applicant by this Final Rejection response have amended Claims 1, 6, 15 and 24. These claims as amended are fully supported by the specification and drawings and add no new matter to the pending application. All of these claims and those claims dependent thereon are now in condition for allowance.

CONCLUSION

In conclusion, applicant respectfully submits that the amendments and remarks herein have overcome every ground for rejection. Accordingly, the

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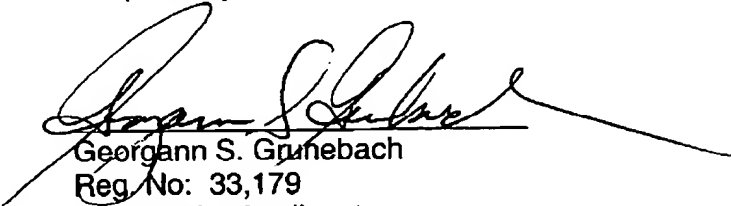
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application is in condition for allowance, and early notice to this effect would be greatly appreciated.

If, for any reason, the Examiner believes that a telephone conference would help clear up any unresolved matters, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

Date: *November 12, 2002*


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APPENDIX "A"

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend the claims without prejudice as follows:

1. **(TWICE AMENDED)** The method for automatically measuring, monitoring, and switching signals for audio broadcasts of program content in AC-3 standard format to be transmitted as AES-3 signal bit streams, said audio broadcasts containing meta data, variable dependent upon said program content comprises:

determining a predetermined count at which each packet in the AES-3 bit stream is to arrive, disabling a response to receipt of the packet to avoid outputting the data in the packet if it is received before said predetermined count has lapsed from receiving the start of a packet, in an AES-3 signal bit stream generated by an original source of said program content for delivery to program content receivers by a direct broadcast satellite system, said direct broadcast satellite system having an uplink system, said uplink system operable to multiplex, modulate, encode and add conditional access information to said AES-3 bit stream;

detecting if a disruption occurs while packet is being received, by said uplink system;

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accepting the packet of AC-3 information for enabling output after a predetermined time period plus the predetermined count from which the last packet started, if a disruption has been detected, and

determining whether said last packet comes within 10 milliseconds after an AC-3 packet was predicted to have arrived, and accepting said last packet as a trigger to provide a valid output in response to said detection.

2. The invention as defined in claim 1 wherein said count is a time count.
3. The invention defined in claim 1 wherein said count is a word count.
4. **(DELETED)**
5. The invention as defined in claim 1 and further comprising wherein if another packet comes within a time period greater than 10 milliseconds but less than the predetermined number of milliseconds between packets, and preventing output by refusing to accept the packet, received in said interval between N and X for enabling output.
6. **(TWICE AMENDED)** A method for controlling the status of channel status bits in multiple data streams, said multiple data streams operable to provide video, uncompressed stereo digital data in a first language and uncompressed stereo digital data in at least a second language

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wherein said video, uncompressed stereo digital data in a first language and uncompressed stereo digital data in at least a second language is program content comprises:

establishing agreement between the channel status bit buried in an AC-3 packet and the channel status bit buried within the MPEG-2 PES header structure, in an AES-3 signal bit stream generated by an original source of said program content for delivery to the IRD by a direct broadcast satellite system, said direct broadcast satellite system having an uplink system, said uplink system operable to multiplex, modulate, encode and add conditional access information to said AES-3 bit stream and

regenerating the channel status bits of the AES-3 stream continuing in [the] said IRD for output of AC-3 to feed an external AC-3 decoder so that the channel status bits comply with the bits in the AC-3 data stream which also agrees with the serial data stream between [the] said IRD and the decoder.

7. The invention as defined in claim 6 wherein said establishing agreement comprises parsing the AC-3 bit stream, determining the channel bit status, setting the channel bit status in MPEG-2 PES header, and generating MPEG-2 PES header in an encoder.

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8. The invention as defined in claim 7 wherein said establishing agreement comprises setting the AC-3 audio stream channel status bit to be on, and recalculating the CRC bit in response to changing the channel status bit in the AC-3 audio stream.
9. The invention as defined in claim 8 wherein said setting comprises an operator manually setting said channel status bit.
10. The invention as defined in claim 8 wherein said setting comprises automatically setting said channel status bit.
11. The invention as defined in claim 8 wherein said channel status bit is a copyright status bit.
12. The invention as defined in claim 8 wherein said establishing agreement comprises setting the AC-3 audio stream channel bit to be off, and recalculating the CRC bit in response to changing the copyright bit status in the AC-3 audio stream.
13. The invention as defined in claim 12 wherein said setting comprises an operator manually setting said copyright bit.
14. The invention as defined in claim 12 which said setting comprises automatically setting said copyright bit.

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15. **(TWICE AMENDED)** An uplink processor for transmitting AC-3 audio streams together with video transmissions, the uplink processor incorporated [with in] within a direct satellite broadcast system comprising:

an encoder with switch logic input automatically sensing sensor audio signal formats and redirecting signals to an encoder adapted to process said second audio signal formats, said encoder operable to output data in the form of digital transport packets[.]; and

a multiplexer, wherein said multiplexer combines said output data with conditional access data, and program guide data.

16. The invention as defined in claim 15 wherein said sensing comprises the sensing of compression in a serial digital interface router.

17. An apparatus for automatically checking cataloging and reporting errors in an AC-3 bit stream signal broadcast in a direct satellite broadcast system comprising:

a monitor including a processor with a clock,
a computer interface for converting AES signal to computer readable language and,
time code labeler for labeling each packet with a time stamp with said processor controlling said computer interface to read data into a buffer, sending a message to the processor's operating system in response to a detector detecting errors in said data and sending a message in response to discrepancies with said labeling.

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18. The invention as defined in claim 17 wherein said detector comprises a state processor finding AC-3 packets, locking into each packet, and detecting any discontinuity in the packets or loss of packets from a signal.

19. The invention as defined in claim 17 wherein said detector is operative checking timing of on-air faults simultaneously with on-air broadcasting of said AC-3 bit stream signal.

20. The invention as defined in claim 19 wherein said detector is operative while preparing a tape for broadcast.

21. A device for playing AC-3 signal out in sync with a video signal, said device incorporated within a direct satellite broadcast system providing program content to a terrestrial receiver comprising:

a monitor including a processor with a time clock, wherein a sound card has an input for a) receiving a house reference AES clock and b) locking audio output to the frequency of video production of a house master generator by said audio card receiving AES clock input to simultaneously start audio and AC-3 data stream.

22. The invention as defined in claim 21 and further comprising a time code reader for automatic start of playback of said video and audio signals in sync.

23. The invention as defined in claim 21 wherein an editor's contact closure is an input to said processor to start playback.

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24. **(ONCE AMENDED)** The invention as defined in claim 21 wherein said monitor determines a size of the packet from a start of the packet, and generates an IEC 958 header based on said determined size[.] .

25. The invention as defined in claim 24 wherein said device places the header and AC-3 packet in buffer, supplements the unfilled spaces in the buffer with a series of bits, and

wherein said device outputs data from the AES-3 card as PCM audio signal.

26. The invention as described in claim 21 wherein the AC-3 data is stored as a data file.

27. The invention as defined in claim 26 wherein the data file is stored on a CD-Rom.